ficial purification of their water supplies, but it cannot be said that the conditions necessitating such action generally exist as yet. In most cases the safer and more economical course will be found to be either the securing of an unpolluted water, if such be available, or the protection from pollution of existing sources of supply.

LETTERS TO THE EDITOR.

**** Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.*

On request in advance, one hundred copies of the number containing his communication will be furnished free to any correspondent.

The editor will be glad to publish any queries consonant with the character of the journal.

American Weeds.

PROFESSOR BYRON D. HALSTED of the New Jersey Experiment Station has recently presented to the agricultural public a list of "American Weeds,"— mostly phanerogams, — which contains no less than 751 varieties and species, exclusive of noxious fungi. Well may the long-suffering farmer turn up the whites of his eyes at this formidable list. A closer examination, however, shows us among the "weeds" all our cultivated clovers, medics, vetches, and many of our best agricultural grasses. The criterion used by the New Jersey botanist in deciding what to admit and what to exclude from his catalogue is not apparent, and no word of explanation is vouchsafed.

In the vegetable kingdom, if not in the United States Republic, it is true that "it is self-evident that all plants are born free and equal." The distinguishing of plants as weeds and not weeds is purely human and artificial. The popular idea of a weed seems to be a repulsive, or hurtful, wild plant. But few persons give exactly the same definition. I have been at some trouble to secure the definitions of a number of intelligent persons, and give below a few samples: —

"A plant where you don't want it." — *Director Experiment Station.*

"A noxious or useless plant." — *Curator of Museum.*

"A plant out of place." — *Chemist.*

"A troublesome plant." — *Chemist.*

"An obnoxious plant of many species not fit for food or medicinal purposes." — *Clerk.*

"A plant not edible, so far as known, nor medicinal, or otherwise serviceable to man, and which always thrives where not wanted." — *Inspector of Fertilizers.*

"A plant for which we have no use so far as we know." — *Meteorologist.*

"(1) Underbrush or bushes; (2) a useless or troublesome plant." — *Webster.*

My own definition: Any plant which from its situation or inherent properties is hurtful to human interests; a vegetable malefactor.

By the usage of the English language the name "weed" is connotative and implies in a plant a bad and hurtful quality. Used metaphorically or analogically it is always a term of opprobrium.

If we were dealing with individual plants as courts of justice deal with persons, each particular plant might he properly described as a weed or not weed according to the circumstances of each case. But here we are dealing not with individuals but with species and varieties, and can take note only of the general character of the groups. If we have planted a bed of pansies, and there springs up among the pansies a red clover plant, this particular plant is hurtful to us, and therefore is treated as a weed, but we are not therefore justified in writing the species *Trifolium protense* in a list of weeds. The general character, — the qualities for which the clover genus generally and this species especially are noted, are good and beneficial to mankind. It was only by chance or the carelessness of some one that this clover plant got into our flower-bed. "The plant out of place" definition of a weed can refer only to a particular plant. It cannot be applied to a species, for a plant of any species is liable to be occasionally misplaced.

We must maintain then that the inclusion in a list of weeds of such plants as the clovers, medics, vetches, and agricultural grasses is unjustifiable and wrong.

A large number of Professor Halsted's "weeds" are mere "wildlings of nature" for which we have as yet found no important use. But justice requires that in the case of plants as well as persons every one shall be held innocent until proven guilty of wrong.

Both from an æsthetic and from a practical standpoint it is true that most of these so-called weed plants are more useful than hurtful. They clothe and beautify waste places. Many of these wild plants furnish food and nectar for honey bees, and all aid more or less in conserving the fertility of the soil, prevent washing etc. It is as unjust to stigmatize such plants as "weeds" as it would be to call all savage tribes criminals.

Professor Halsted omits wholly and without comment noxious fungi from his list of weeds. Yet these are our very worst and most dangerous weeds. In number they far outrun all the phanerogamic species.

To justify its inclusion in a list of "American weeds" a plant must not only possess a positively noxious character, but must also be sufficiently obnoxious or wide spread to give it a national reputation.

If we exclude from Professor Halsted's list all obscure and non-noxious species we shall have left about 150 *species* of weed-plants worthy to be called "American Weeds."

GERALD MCCARTHY.

N. C. Experiment Station, July 5.

Some Remarks on Professor Cyrus Thomas's Brief Study of the Palenque Tablet.

IN *Science*, No. 488, Professor Cyrus Thomas stated that "the particular manner of reckoning the days of the month" — or more precisely, the exact designation of a date by the sign of the day and the position it holds in the number of twenty days (*uinal*) that people are in the habit of calling a Maya month — as it is found not only "in some of the series of the Dresden Codex," but throughout the whole of it, is also found on the Palenque tablet. This statement undoubtedly is a correct one. But Professor Thomas, following Professor Förstemann, asserts that the "peculiarity of this method is that the day of the month is counted not from the first of the given month, but from the last of the preceding month; thus the fifteenth day of *Pop*, beginning the count with the first, will, according to this method, be numbered 16." If it were really so, this method of reckoning the days of the month would be a very curious one, and hardly to be understood. Professor Förstemann based this assertion on the supposition that the calendar system of the Dresden Codex is the same as that which prevailed in Yucatan at the time of Bishop Landa's writing. In vol. xxiii. of the *Zeitschrift für Ethnologie*, published by the Berlin Anthropological Society, in a paper entitled "Zur mexikanischen Chronologie, mit besonderer Berücksichtigung des zaposekischen Kalenders," I have shown that the priests who wrote down the Dresden Codex did not begin their years with the days *kan, muluc, ix, cauac*, as in Landa's time, but with the days *been, e'tznab, akbal, lamat*, exactly corresponding to the *acatl, tecpatl, call, tocbtl* (cane, flint, house, rabbit), the signs used by the Mexicans to designate their respective years. Beginning the years in this manner, the day 4 *ahau* 8 *cumku* is really the eighth day of the month *cumku* in the *been*, or "cane," years. The day 9 *kan* 12 *kayab* is really the twelfth day of the month *kayab* in the same *been*, or "cane," years; and thus with all the other dates throughout the whole Dresden Codex.

The evidence derived from the fact that the same method of numbering the days of the month, that is to say, the same method of beginning the years, is also found in the Palenque tablet, leads — I agree with Professor Thomas — to the inference "that there were intimate relations between the people of this city and those where the Dresden Codex was written, and that there is no very great difference in the ages of the two documents." On the other